

CLAIMS

1. Articulated joint for tubes of electric household appliances,
comprising a plurality of axially hollow modular elements, each
modular element comprising a male end and a female end,
5 coupling means for joining said modular elements to each other,
resilient means fitted to at least two adjacent modular elements,
said resilient means being deformable resiliently under the action of
a force with simultaneous rotation of a modular element with
respect to an adjacent modular element and consequent variation
10 in the configuration of said joint from straight to curved and resilient
return into the straight configuration when said force ceases to act.
2. Joint according to Claim 1, in which said coupling means retain the
male end of a first modular element inside the female end of a
second modular element.
- 15 3. Joint according to Claim 1 or 2, in which said coupling means
connect a male end of said first modular element having a
substantially spherical head inside the female end of said second
modular element.
- 20 4. Joint according to one of the preceding claims from 1 to 3, in which
said coupling means comprise a first and a second annular unit,
said first annular unit being able to be associated with the male end
of said first modular element and said second annular unit being
able to be inserted with pressure inside the female end of said
25 second modular element, said first annular unit interfering with said
second annular unit so as to retain said two modular elements
together.
5. Joint according to Claim 4, in which said first annular unit comprises
two semi-annular bands.
- 30 6. Joint according to Claim 4, in which said second annular unit
comprises a first annular band followed by a portion with a narrower

cross-section forming a step and by a second annular band having a smaller diameter than the first band, said second annular unit being able to be inserted with pressure inside said female end of the modular element.

- 5 7. Joint according to Claim 6, in which said second annular unit which can be inserted with pressure inside said female end of the modular element is inserted until said annular band is brought into contact against a suitable shoulder of the modular element.
- 10 8. Joint according to Claim 5, in which each modular element comprises a substantially spherical head provided with a pair of lateral pins emerging so as to project outwards in opposite directions and each semi-annular band comprises a groove for each receiving one of said pins, each pin having a height not greater than the thickness of said groove.
- 15 9. Joint according to Claim 8, in which said groove has a substantially semi-circular shape and houses one of said pins with a small amount of play so as to allow rotation of each element with respect to at least one other element only in a substantially common plane.
- 20 10. Joint according to Claim 8, in which said groove extends longitudinally along a part of the peripheral portion of said semi-annular bands, thus allowing said pins to rotate also with respect to said first annular unit.
- 25 11. Joint according to Claim 1, in which said resilient means are aligned with each other.
- 30 12. Joint according to Claim 11, in which said resilient means comprise metal springs, each spring having a first end constrained to a first modular element and a second end constrained to an adjacent modular element.
13. Joint according to Claim 11 or 12, in which said modular elements comprise means for housing the resilient means.

14. Joint according to Claim 13, in which said housing means comprise
in a modular element a single casing formed by two shells having a
first closed end and a second open end, each resilient means being
inserted into said second open end of the two shells of two adjacent
modular elements.
15. Joint according to any one of Claims 1 to 14, in which two terminal
elements of said joint are provided at their ends with two cylindrical
portions which can be associated with two tubes, a first tube being
able to be connected to a suction tube connected to a suction
accessory of said electric household appliance and a second tube
being able to be connected to said electric household appliance
and also being integral with steering means.
16. Joint according to any one of Claims 11 to 15, in which said
resilient means are associated with the elements of the articulated
joint during the process for moulding of the latter.
17. Joint according to Claim 15, in which the resilient means comprise
a single spring which extends along all the elements of the joint and
is constrained to at least two elements of said joint.
18. Electric household appliance comprising, between two tubes, an
articulated joint according to any one of Claims 1 to 17.
19. Electric household appliance according to claim 18, characterized
in that it is a vacuum cleaner.
20. Electric household appliance according to claim 18, characterized
in that it is an electric brush.